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(54) **SCAFFOLDED BORAZANE-LITHIUM
HYDRIDE HYDROGEN STORAGE
MATERIALS**

(75) Inventors: **Alexandra N. Torgersen**, Novi, MI
(US); **Scott W. Jorgensen**, Bloomfield
Township, MI (US)

(73) Assignee: **GM Global Technology Operations,
Inc.**, Detroit, MI (US)

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252/184

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206/0.7; 502/526; 420/900; 423/248, 646,
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See application file for complete search history.

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Primary Examiner—Frank M. Lawrence

(74) *Attorney, Agent, or Firm*—Kathryn A. Marra

(57) **ABSTRACT**

In one aspect, the invention provides a hydrogen storage
composite formed of a mesoporous scaffolding material and
a hydrogen storage composition comprising precursors that
react to form quaternary B—H—Li—N composition. In
another aspect, the invention provides a process for forming
hydrogen storage material. In each aspect, a high portion of
hydrogen is released as hydrogen gas and a lesser portion of
hydrogen is released as a hydrogen-containing byproduct.

31 Claims, 17 Drawing Sheets